

REMARKS**Summary of the Office Action**

Claims 1-4 and 6-10 were rejected under 35 U.S.C. § 103 as being unpatentable over Applicants' Admitted Prior Art (Figs. 5 and 6 of Applicants' specification) in view of Khandros et al. (U.S. Patent No. 6,476,333).

The drawings were objected to.

Summary of the Response to the Office Action

Applicants have amended claims 1-3 and 6-10.

Applicants have added new claim 12.

Applicants submit concurrently herewith a Request for Approval of Drawing Changes.

Claims 1-12 are pending, of which claims 5 and 11 are withdrawn from consideration.

All Claims Define Allowable Subject Matter

Claims 1-4 and 6-10 were rejected under 35 U.S.C. § 103 as being unpatentable over Applicants' Admitted Prior Art (Figs. 5 and 6 of Applicants' specification) in view of Khandros et al. To the extent the Examiner considers the rejection to apply to the amended claims, the rejection is respectfully traversed as being based on a combination of references that neither teach, nor suggest, the novel and unobvious combination of features recited in the amended claims.

Amended claim 1 recites a combination of features including "the external terminal portion is constructed by substantially rigid clad material having laminated different metal material layers." Amended claim 3 recites a combination of features including "an external terminal portion, which is formed on the board for connecting to an external apparatus, is

constructed by substantially rigid clad material in which plural different metal material layers are laminated.” Amended claim 6 recites a combination of features including “the joint body is constructed by substantially rigid clad material having laminated different metal material layers.” Support for these claimed features may be found at, for example, page 5, lines 5-7, of Applicants’ specification as originally filed.

The Office Action relies on Khandros et al. for allegedly teaching an external terminal portion constructed by clad material having laminated metal layers of different metal material to modify Applicants’ Admitted Prior Art. Applicants respectfully submit that Khandros et al. does not overcome the above-described deficiencies of Applicants’ Admitted Prior Art. Specifically, Khandros et al. fails to disclose at least the features of an external terminal portion constructed by substantially rigid clad material having laminated different metal material layers. As described at col. 1, ll. 20-25, an object of the Khandros et al. invention is to provide a particularly resilient contact structure attached directly to active silicon devices. As described at col. 7, ll. 21-25, and shown in Fig. 3 of Khandros et al., contact structure 136 has a flexible elongate conductive element 137 provided with two bends, 137a and 137b formed therein. Because the combination of Applicants’ Admitted Prior Art and Khandros et al. fails to teach or suggest each element of amend claims 1, 3 and 6, Applicants respectfully request that the rejection under 35 U.S.C. § 103, of claims 1, 3 and 6, be withdrawn.

Moreover, Applicants submit that the combination of Applicants’ Admitted Prior Art and Khandros et al. is improper because Khandros et al. teaches away from Applicants’ inventions recited in claims 1, 3 and 6. There would have been no motivation to combine the teachings of Khandros et al. with Applicants’ Admitted Prior Art to reach the inventions of amended claims

1, 3 and 6. Applicants respectfully request that the rejection under 35 U.S.C. § 103, of claims 1, 3 and 6, be withdrawn for this reason as well.

Claim 2 depends from claim 1, claim 4 depends from claim 3, and claims 7-10 depend from claim 6. The dependent claims recite the same combination of allowable features recited in the respective base claims, as well as additional features that further distinguish over the prior art.

Attached hereto is a marked-up version of the changes made by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

CONCLUSION

In view of the foregoing, Applicants respectfully request reconsideration and the timely allowance of claims 1-4, 6-10 and 12. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

MORGAN, LEWIS & BOCKIUS LLP

Dated: April 28, 2003

By: 

Peter J. Sistare

Registration No. 48,183

CUSTOMER NO. 009629

MORGAN, LEWIS & BOCKIUS LLP

1111 Pennsylvania Avenue, N.W.

Washington, D.C. 20004

202.739.3000

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 1-3 and 6-10 have been amended as follows:

1. (Amended) A circuit board comprising:
a board; and
an external terminal portion formed on the board for connecting to an external apparatus;
wherein the [~~above-mentioned~~] external terminal portion is constructed by **substantially rigid** clad material [~~that plural~~] **having laminated different** metal **material** layers [having
~~different metal-material each other are laminated~~].

2. (Amended) A circuit board according to claim 1, wherein the [~~said~~] external terminal is constructed by a first metal layer made of Cu, a second metal layer formed on the first metal layer and made of stainless steel, and a third metal layer formed on the second metal layer and made of Ni alloy.

3. (Amended) A battery pack comprising:
a case;
a battery installed in the case; and
a circuit board connected to the battery;
wherein said circuit board is further comprising:
a board; and

RECEIVED
MAY - 2 2003
TC 2800 MAIL ROOM

an external terminal portion, which is formed on the board for connecting to an external apparatus, is constructed by substantially rigid clad material in which plural different metal material layers [~~having different metal material each other~~] are laminated,

further wherein the [~~above-mentioned~~] case has an opening and the [~~above-mentioned~~] circuit board is located so that the [~~above-mentioned~~] external terminal portion faces outside from the [~~above-mentioned~~] opening.

6. (Amended) A circuit board module comprising:

a battery case storing a battery;

a circuit board for carrying out charge and discharge of the [~~above-mentioned~~] battery;

and

a joint body [~~member~~] for connecting the [~~above-mentioned~~] battery case and circuit board electrically and/or mechanically;

wherein the [~~above-mentioned~~] joint body is constructed by substantially rigid clad material [~~that plural~~] having laminated different metal material layers [~~having different metal material each other are laminated~~].

7. (Amended) A circuit board module according to claim 6, wherein at least one metal layer of the [~~above-mentioned metal layers of the above-mentioned~~] joint body consists of the same kind of metal material of the [~~above-mentioned~~] battery case.

8. (Amended) A circuit board module according to claim 6, wherein the ~~[above-mentioned]~~ joint body is constructed by a first metal layer made of Ni and a second metal layer made of Al.
9. (Amended) A circuit board module according to claim 8, wherein thickness ratio of the ~~[above-mentioned]~~ first metal layer and second metal layer of the ~~[above-mentioned]~~ joint body is about 1:1 to about 2:1.
10. (Amended) A circuit board module according to ~~[any-of]~~ claim 9, wherein the ~~[above-mentioned]~~ joint body is roughly rectangle and is used being bent at the designated position in longitudinal direction.

New claim 12 has been added.